In the Claims

CLAIMS

Claims 1-35 (Canceled).

36. (Previously presented) A method of forming a structure over a semiconductor substrate, comprising:

forming a silicon-dioxide-containing layer physically against the substrate;

providing nitrogen within the silicon-dioxide-containing layer, substantially all of the nitrogen within the silicon-dioxide-containing layer being spaced from the substrate; and

after providing the nitrogen within the silicon-dioxide-containing layer, forming conductively doped silicon on the silicon-dioxide-containing layer.

37. (Previously presented) The method of claim 36, wherein the silicon-dioxide-containing layer is at least about 40 angstroms thick, and wherein substantially all of the nitrogen is within the top 30 angstroms of the silicon-dioxide-containing layer.

38. (Previously presented) The method of claim 36, wherein the silicon-dioxide-containing layer is at least about 40 angstroms thick, and wherein substantially all of the nitrogen is within the top 10 angstroms of the silicon-dioxide-containing layer.

39. (Previously presented) The method of claim 36, wherein an entirety of the nitrogen within the silicon-dioxide-containing layer is spaced from the substrate.

40. (Previously presented) The method of claim 39, wherein the silicon-dioxide-containing layer is at least about 40 angstroms thick, and wherein substantially all of the nitrogen is within the top 10 angstroms of the silicon-dioxide-containing layer.

41. (Previously presented) The method of claim 39, wherein the silicon-dioxide-containing layer is at least about 40 angstroms thick, and wherein no measurable nitrogen is below the top 30 angstroms of the silicon-dioxide-containing layer.

42. (Previously presented) The method of claim 36, wherein the nitrogen is provided within the silicon-dioxide-containing layer after forming the silicon-dioxide-containing layer.

43. (Withdrawn) A method of forming a structure over a semiconductor substrate, comprising:

forming a silicon-dioxide-containing layer physically against the substrate, the silicon-dioxide-containing layer having an upper portion and a lower portion, the upper portion being spaced from the substrate by the lower portion;

after forming the silicon-dioxide-containing layer, providing nitrogen within only the upper portion of the silicon-dioxide-containing layer; and

after providing the nitrogen within only the upper portion of the silicon-dioxide-containing layer, forming conductively doped silicon physically against the upper portion of the silicon-dioxide-containing layer.

44. (Withdrawn) The method of claim 43, wherein the lower portion is about 10 angstroms thick.

45. (Withdrawn) The method of claim 43, wherein the upper portion is about 10 angstroms thick.

46. (Previously presented) A method of forming a transistor, comprising:

forming a gate oxide over a semiconductor substrate, the gate oxide comprising an upper surface;

exposing the upper surface of the gate oxide to a nitrogen species in plasma conditions without biasing the semiconductor substrate, the exposing allowing penetration of nitrogen into the upper surface without any measurable amount of nitrogen penetrating substantially below the upper surface;

forming a gate of conductively-doped silicon over the gate oxide; and

forming source/drain regions in the semiconductor substrate operatively proximate the gate.

47. (Previously presented) The method of claim 46, wherein the exposing comprises having the nitrogen species at least 12 inches from the upper surface of the gate oxide.

48. (Previously presented) The method of claim 46, wherein the exposing comprises providing the nitrogen species as a highly activated nitrogen species, and further comprising limiting the penetration of nitrogen into the upper surface by enabling the highly activated nitrogen species to relax before the penetration.

49. (Previously presented) A method of forming a structure over a semiconductor substrate, comprising:

forming a silicon-dioxide-containing layer physically against the substrate, the silicon-dioxide-containing layer comprising an upper surface;

providing nitrogen primarily within the upper surface of the silicon-dioxide-containing layer; and

forming conductively doped silicon physically against the upper surface of the silicon-dioxide-containing layer.

50. (Previously presented) The method of claim 49, wherein the silicon-dioxide-containing layer further comprises an upper portion and a lower portion, the upper portion including the upper surface and being spaced from the substrate by the lower portion, and wherein the providing of the nitrogen comprises an entirety of the nitrogen within the upper portion.

51. (Previously presented) The method of claim 49, wherein the silicon-dioxide-containing layer further comprises an upper portion and a lower portion, the upper portion including the upper surface and being spaced from the substrate by the lower portion, and wherein the providing of the nitrogen comprises substantially all of the nitrogen within the upper portion.

52. (Previously presented) The method of claim 49, wherein the silicon-dioxide-containing layer further comprises an upper portion and a lower portion, the upper portion including the upper surface and being is spaced from the substrate by the lower portion, and wherein the providing of the nitrogen comprises no measurable amount of the nitrogen within the lower portion.

53. (Previously presented) The method of claim 52, wherein the lower portion is about 10 angstroms thick.

54. (Previously presented) The method of claim 52, wherein the upper portion is about 10 angstroms thick.

55. (Previously presented) The method of claim 52, wherein the silicon-dioxide-containing layer is at least about 40 angstroms thick, and wherein the upper portion is about 10 angstroms thick.